This application was examined with claims 1 through 16. Claims 1 through 16 are finally rejected. Claims 1, 5, 9 and 13 are amended. Claims 1 through 16 remain in the application.

Applicant requests reconsideration and reexamination of the above-identified application in view of the amendments made to the specification and claims. The following remarks state Applicant's bases for making this request and are organized according to the Examiner's Action by paragraph number.

<u>Examiner's Action, Paragraphs 1 - 3</u>

The Examiner's comments are noted.

<u>Examiner's Action, Paragraph 4</u>

The Examiner states that substantial portions of the disclosures in U. S. Patent Nos. 6,363,385 and 7,031,966 are similar, and that this application has a common inventor. The Examiner questions whether Applicants should obtain the benefit of the filing date of the prior applications. Applicants have considered this matter. This application was filed without claiming the benefit of these co-pending applications. Applicants continue to believe that it should not claim the benefit of this earlier filing date.

Examiner's Action, Paragraphs 5 and 6

The Examiner rejects claims 1 through 4, 9 through 12 under the judicially created doctrine of obviousness-type double patenting over claims in U. S. Patent Nos. 7,031,966 and 7,099,875. Applicants are submitting a Terminal Disclaimer with respect to U. S. Patent No. 6,363,385. Corresponding Terminal Disclaimers with respect to U. S. Patent Nos. 6,363,385 are of record for U. S. Patent Nos. 7,031,966 and 7,099,875.

Examiner's Action, Paragraphs 7 and 8

The Examiner objects to claims 1 and 5 for the lack of antecedent basis and for a grammatical error. Applicants have amended claims 1 and 5 appropriately.

Examiner's Action, Paragraph 9

The Examiner rejects claims 1 through 16 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner argues that independent claims 1, 5, 9 and 13 recite a first command and a second command and that the specification fails to explicitly define these commands.

Applicants respectfully submit that the specification does define those commands. Specifically, the FILE SMMF COPY command produces the first or ESTABLISH phase. The statement that the phase "is in response to a first command" has been

20

added at page 16, line 19. A similar change is made at page 17, line 2. A further change is made at page 33, line 2 to indicate the "second command". None of these changes constitute new matter.

Examiner's Action, Paragraphs 10 and 11

The Examiner rejects claims 1, 2, 5, 6, 9, 10, 13 and 14 as being anticipated by U. S. Patent No. 6,363,385 (hereinafter the Kedem at al. patent). In summary the Examiner argues that the Kedem et al. patent discloses a data processing system with a method including steps of establishing, making source and destination logical devices available and initiating a copy operation.

While certain of the language in each of the claims could be construed to read on portions of the disclosure in the Kedem et al. patent, Applicants respectfully submit that other language in each claim define features that are not disclosed by the Kedem et al. patent.

Each of independent claims 1, 5, 9 and 13 defines the invention in terms of varying scope and application. That is, independent claims 1 and 5 define the invention with method claims. Claims 9 and 13 define the invention with apparatus claims. As the distinguishing features are common to all the claims, Applicant believes that the following discussion responds to all the rejections of claims 1, 2, 5, 6, 9, 10 13, 14.

First, each claim states that the data storage facility connects to an "open system" network as opposed to a "mainframe" system network. As described beginning at page 2, line 11, "mainframe system" refers to IBM and IBM-like data processing systems that use a powerful set of internal input-output commands and CKD (count-key-data) data formatting. An "open system", on the other hand, operates with different internal input-output commands and different internal protocols and with an FBA (fixed block architecture). The background of the invention further describes the problems that would be encountered if one were to try to apply the invention in the Kedem et al patent to an open system network. These include unacceptable processing delays introduced by overhead and an inability to identify an "extent" to be copied other than at a logical volume level.

Claim 1 defines a first command and a second command. The Kedem et al. patent discloses only a single FILE SMNF command. Once that command is executed three operating phases occur in sequence. In an open system network, it was determined that the interval that would have expired between the execution of the FILE SMMF command and the initiation of actual copying was not predictable. This could be a particular problem when attempting to make a point-in-time copy. There was no way to guarantee that the copy would be made at a designated time. The use of the first and second commands in accordance with this invention overcomes that issue. The first command does not initiate an automatic sequence with the initiation of the

second command. The first command can be executed well in advance of the time the copy is required. Then the second command can be executed at the specified time with the immediate initiation of the copying process.

As part of this implementation of this invention, certain control data information is added. Each claim defines a data structure that includes an operation data element and an operation status element. No such elements are shown or suggested in the data structure shown in FIG. 3 of the Kedem et al. patent.

Each claim states that the initiation of the ordered copying is in response to the second command and an indication that the establishment phase has been completed. The completion of the establishment phase is determined by analyzing the data element and operation status element in the data structure. The Kedem et al. patent discloses no such test.

Each claim defines two steps for updating the operation data and status elements. The first occurs on execution of the second command to indicate that copying is in progress. The second occurs upon completion of the copying to indicate that the copying is completed. Again, as no structure corresponding to the operation data and status elements exists, there is no need and no disclosure of such updating operations.

Therefore Applicants respectfully submit that the Kedem et al. patent does not anticipate Applicants' invention as set

23

forth in independent claims 1, 5, 9 and 13 and corresponding
depending claims 2, 6, 10 and 14.

Examiner's Action, Paragraphs 12 and 13

The Examiner notes that the application names joint
inventors. Applicants respectfully submit it sees no reason to
change the names of the inventors.

Examiner's Action, Paragraph 14

The Examiner further rejects claims 3, 4, 7, 8, 11, 12, 15
and 16 under 35 U.S.C. 103(a) as being unpatentable over the
Kedem et al. patent as applied to claim 1 and further in view
of U. S. Patent No. 6,757,797 to Kaiya et al. (the "Kaiya et
al. patent"). Both the Kedem et al. and Kaiya et al. patents
have been discussed in the prior response. For brevity
Applicants will not discuss those references again. Suffice it
to say, the Kedem et al. patent fails to disclose the use of
the claimed invention in an open system, a data structure with
operation data and operation status elements, and the use of
first and second independent commands to produce a first
establishment phase and a second copying phase in a copy
operation. Applicants further submit that the Kaiya et al.
patent does not disclose these particular features.
Consequently Applicants respectfully submit that the Examiner's
combination of the Kedem et al. and Kaiya et al. patents, even
if appropriate, does not disclose the fundamental features of
each claim. Consequently, Applicants submit that each of

claims 3, 4, 7, 8, 11, 12, 15 and 16 taken as a whole, should be allowed.

Examiner's Action, Paragraphs 15 through 17

Applicants have reviewed the Examiner's comments in Paragraphs 15 through 17 and believe there is no need to make a specific response in view of the balance of the Office Action.

Applicants acknowledge the prior art made of record in Paragraph 18.

Summary

Applicants have amended the specification and independent claims 1, 5, 9 and 13 to overcome the Examiner's objections and rejections. Applicants are submitting a Terminal Disclaimer to U. S. Patent No. 6,363,385. Consequently Applicants believe that, collectively, there now exists a set of claims that are patentable over the prior art specifically represented by the Kedem et al. and Kaiya et al. patents.

We respectfully request that this amendment be entered because we believe that it places the application in condition for allowance or in better condition for appeal.

If there are any questions, we urge the Examiner to call us collect. Please charge any costs in connection with this document to EMC Corporation's Deposit Account No. 05-0889.

Respectfully Submitted,

/George A Herbster/

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